



WORKPLACE SAFETY AND HEALTH IN MICHIGAN

*From The
National Institute for Occupational Safety and Health*



State Profile 2002

*Delivering on the Nation's promise:
Safety and health at work for all people through prevention.*

The National Institute for Occupational Safety and Health

NIOSH is the primary federal agency responsible for conducting research and making recommendations for the prevention of work-related illness and injury. NIOSH is located in the Department of Health and Human Services in the Centers for Disease Control and Prevention. The NIOSH mission is to provide national and world leadership to prevent work-related illness, injury, disability, and death by gathering information, conducting scientific research, and translating the knowledge gained into products and services. As part of its mission, NIOSH supports programs in every state to improve the health and safety of workers. NIOSH has developed this document to highlight recent NIOSH programs important to workers and employers in Michigan.

The Burden of Occupational Illness and Injury in Michigan

- In Michigan, there are approximately 5 million individuals employed in the workforce.¹
- In 2000, 156 workers died as a result of workplace injuries.²
- The construction industry had the highest number of fatalities, followed second by manufacturing, and third by services.²
- In 1999, the most recent year for which data are available, the rate of fatal workplace injuries was 3.7 deaths per 100,000 workers—below the national average rate of 4.5 deaths per 100,000 workers.²
- In 2000, there were 290,000 nonfatal workplace injuries and illnesses in Michigan.³

The Cost of Occupational Injury and Illness in Michigan

In 2000, the most recent year for which data are available, a total of \$1.6 billion was paid for workers' compensation claims by Michigan private insurers and self-insured employers.⁴ This figure does not include compensation paid to workers employed by the federal government and also underestimates the total financial burden for private sector businesses, since only a fraction of health care costs and earnings lost through work injuries and illnesses is covered by workers' compensation. Chronic occupational illnesses like cancer are substantially under-reported in workers' compensation systems because work-relatedness is often difficult to establish.

How NIOSH Prevents Worker Injuries and Diseases in Michigan

Health Hazard Evaluations (HHEs) and Technical Assistance

NIOSH evaluates workplace hazards and recommends solutions when requested by employers, workers, or state or federal agencies. Since 1993, NIOSH has responded to 72 requests for HHEs in Michigan in a variety of industrial settings, including the following example:

Flint, Michigan: Lead Exposure

In 2000, NIOSH responded to a request for an HHE from employees at a company that manufactures automotive components, systems, and modules in Flint, Michigan, to evaluate possible exposure to lead from the use of wave solder machines during the production of circuit boards. NIOSH investigators sampled the air for lead and tin dust originating from the solder and found no amounts of lead or tin above the U.S. Occupational Safety and Health Administration's permissible exposure limits. The presence of accumulated lead was detected by surface sampling for lead dust from equipment surfaces, lunch room tables, floors, and hands of employees. NIOSH investigators recommended establishing regular and thorough housekeeping practices and ensuring awareness of the importance of personal hygiene practices.

Fatality Assessment and Control Evaluation (FACE) Investigations

NIOSH developed the FACE program to identify work situations with a high risk of fatality and to formulate and disseminate prevention strategies. The following FACE investigation was conducted in Michigan:

Michigan: Youth Laborer Dies in Trench Collapse

A 17-year old male laborer died and another worker was injured after one of the unprotected walls (lacking shielding or adequate sloping) of the trench in which they were working collapsed, striking and partially burying them with soil. NIOSH investigators concluded that employers should: ensure workers are protected from potential cave-ins by an adequate protective system; comply with child labor laws prohibiting work by youths less than 18 years of age in occupations declared particularly hazardous by the U.S. Secretary of Labor; identify all youths at the worksite and make all their coworkers aware of their presence; inform employees of appropriate work assignments for youths; ensure a competent person inspects excavations, adjacent areas, and protective systems daily; and train workers to recognize and avoid unsafe conditions.

Building State Capacity

State-Based Surveillance

NIOSH funds the Adult Blood Lead Epidemiology and Surveillance Program (ABLES) in the Michigan Department of Consumer and Industry Services. Through ABLES, the agency's staff track and respond to cases of excessive lead exposures in adults which can cause a variety of adverse health outcomes such as kidney or nervous system damage and potential infertility. In addition, NIOSH funds the Sentinel Event Notification System for Occupational Risks, or SENSOR, through which Consumer and Industry Services Department staff track and develop interventions for specific occupational diseases and injuries such as asthma.

Michigan Education and Research Center (ERC)

The purpose of the Michigan ERC, one of 16 NIOSH ERCs nationwide, is to provide comprehensive academic and research training in occupational health nursing, industrial hygiene, occupational medicine, and safety engineering and ergonomics. Training is also provided through continuing education and outreach programs to practicing professionals and community groups in the region. In fiscal year 2001, 84 students

were enrolled in the graduate programs and 22 students were graduated. Twenty-one continuing education courses were conducted for 1,619 professionals.

Graduate Training Program in Wayne State University

This program, based in the Department of Family Medicine, Division of Occupational and Environmental Medicine, provides residency training for occupational physicians with an emphasis on disability management. In fiscal year 2001, six residents were enrolled and one resident was graduated.

Extramural Programs Funded by NIOSH

The following are examples of recent research contracts, research grants, training grants, or cooperative agreements funded by NIOSH in the state of Michigan.

Hearing Loss Prevention

With support from NIOSH, researchers at the University of Michigan are studying ways to increase the use of hearing protection devices by engineers and construction workers who operate heavy equipment. The project will test the effectiveness of training interventions and the feasibility of a computer-based self-administered hearing screening test.

Linking Work-Related Injury and Illness Data

With support from NIOSH, researchers at Michigan State University are working on a project that will link nine federal and local work-related injury and illness databases. The data will be used to develop a more efficient tracking method and prioritize, target, and evaluate public health and enforcement activities.

Truck Driver Injuries

Nationwide and across all occupations, truck drivers have experienced the most injuries and illnesses with time away from work since 1993. However, the risk factors for these injuries and illnesses are not well understood. NIOSH funds researchers at the University of Michigan to study a population of about 12,000 workers who had work-related injuries or illnesses during 1996-98 in order to: estimate incidence rates of truck driver injuries by motor carrier operating characteristics, fleet size, and truck configuration; estimate medical care use in different medical care settings by driver demographic characteristics, truck firm characteristics, and specific medical diagnosis; and develop different models to measure lost work-time resulting from truck driver injuries.

Additional information regarding NIOSH services and activities can be accessed through the NIOSH home page at <http://www.cdc.gov/niosh/homepage.html> or by calling the NIOSH 800-number at 1-800-356-NIOSH (1-800-356-4674).

¹U.S. Department of Labor (DOL), Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics, Current Population Survey, 2000.

²DOL, BLS in cooperation with state and federal agencies, Census of Fatal Occupational Injuries, 1999-2000.

³DOL, BLS in cooperation with participating state agencies, Survey of Occupational Injuries and Illnesses, 2000.

⁴National Academy of Social Insurance, *Workers' Compensation: Benefits, Coverage, and Costs, 2000 New Estimates*, May 2002.